

RISK MANAGEMENT PROGRAMME FOR FUEL OIL PROTECTION

Fuel oils are fundamental for many rural businesses and dwellings. Traditionally, theft of oil was considered low-risk because of the practical difficulties in its removal for relatively little commercial gain. However, following significant increases in fuel oil prices, storage tanks have become a target risk as they may contain significant values.

Often the consequence of attack is escape of fuel oil with the potential for serious pollution problems, which are difficult and extremely costly to clean up, and which may present increased fire and/or explosion risks.

The Oil Storage Regulations apply to all new installations in the UK (both domestic and commercial) and Environmental Agencies Pollution Prevention Guidelines (PPG 2) to be followed.

The following information is provided for guidance purposes only

1) RISK ASSESSMENT

A risk assessment is to be undertaken to assess all the risks associated with fuel oil tanks and the adequacy of existing precautions. The following to be considered:

- a) tank, contents and location
- b) crime history of both the premises and the immediate locality
- c) physical security
- d) electronic security
- e) fire safety
- f) impact protection
- g) fire and pollution prevention and control.

2) TANK, CONTENTS & LOCATION

- a) Record the number, location, tank storage capacity and the date/times when tanks are filled
- b) Consider the location of tanks with particular regard to concealment as most thieves prefer to operate unseen. Fuel tanks located away from buildings or dwellings are more vulnerable if they are outside normal visual surveillance by site occupants. Where possible locate the tank where it can be viewed from the house
- c) The tank to be located clear of vehicle access routes or suitable bollard/barrier protection provided to prevent potential impact damage
- d) Where possible the level of oil storage in the tank to be the minimum essential requirements
- e) Consideration to be given to fuel tank location in relation to the proximity of Sites of Specific Scientific Interest (SSSIs), rivers or nature reserves and away from any drainage channel or pipe.

3) PHYSICAL SECURITY MEASURES

In assessing the level of physical security required the following to be considered:

- a) locked building – ideally fuel tanks to be located within a locked building with doors secured by BS 3621 2007, BS EN 1303 2005 approved locks or BS EN 12320 approved padlocks. Windows to be secured by key operated window locks or security bars or grilles
- b) external yards and compounds – tanks not to be sited immediately adjacent to yard perimeter fencing or vehicle site access points. Ideally they should be within an enclosed compound with secured access (Tank Guard is an example of a product which surrounds the storage tank with a metal enclosure which has lockable access doors to allow filling and maintenance and internal anchorage points to secure it to the concrete base). To restrict vehicle access to the tank consider installing removable vehicle barriers
- c) pump and tank controls – pump controls to be sited within a building secured as above. Fuel dispensing nozzles and filler/vent caps to be manually locked. Power shut off and key security for the control units to be considered for bulk holding tanks.



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4) ELECTRONIC MEASURES

In assessing the level of electronic security required, the following to be considered:

- a) intruder alarm protection (internal sited tanks) – where fuel tanks are sited internally within a building, consider extending any existing intruder alarm system to provide specific detection to the tank itself
- b) intruder alarm protection (external sited tanks) – detecting access to areas around external tanks can be more problematic in limiting false alarms, but can be achieved by careful design and use of suitable alarm detection such as infra-red ray beams, either linked to stand alone or existing premises alarm systems. All external detectors to be on a separate zone to those protecting the property and configured for key holder response only
- c) closed circuit television – it is recommended that this be considered for large bulk commercial storage installations or where there has been a history of thefts. There should be CCTV coverage of internal or external areas of the premises as follows:
 - i) the supply, installation and maintenance of the system to be undertaken by a reputable and experienced installer, preferably approved by an independent inspection body such as National Security Inspectorate (NSI)
 - ii) where remote monitoring is recommended to reduce the risk of pollution seepage and theft the CCTV system to comply with British Standard BS 8418 or European Standard BS EN 50132
 - iii) the system to provide coverage of all vulnerable areas
 - iv) sufficient lighting to be provided, or night time vision cameras used, to ensure pictures are of suitable quality during the hours of darkness
 - v) to be fully effective the system to be activated, out of business hours, by detectors within the perimeter security of the premises and be connected to an NSI approved alarm receiving centre which can arrange an appropriate response
- d) security lighting – this can be beneficial in the protection of fuel oil tanks. Low energy ‘dusk ‘til dawn’ lights positioned close to the tank usually provide sufficient light to illuminate any suspicious activity. This type of light can be both effective and inexpensive. High powered lights can also be used
- e) oil level gauges – remote electronic oil level gauges will set off an audible or monitored

alarm if the oil level in the tank suddenly drops or falls below a defined level (e.g. Oil Guard Alert). These gauges can, where practical, be located in the dwelling house to warn of any potential problem or be linked to an intruder alarm system, which may have a local sounder or remotely monitored signalling (refer to intruder alarm installer for guidance)

- f) control switches – control switches which control the flow of oil to be turned off and the electricity supply isolated when the tank is not in use.

5) ADDITIONAL MEASURES TO REDUCE THE RISK OF OIL SPILLAGE

- a) Used or refurbished oil tanks not to be installed as they have generally been removed for a reason. Even if refurbished, a tank may have been leaking at another site or replaced as a result of age. A used or refurbished tank should not be considered as a replacement
- b) Transfer of product from an old tank to a new tank to be avoided. New steel tanks are initially more susceptible to corrosion caused by the presence of sludge, acids, micro-organisms and water including salt water. If transfer is absolutely necessary the tank manufacturer’s recommended practices regarding fuel oil pump over or transfer to be followed
- c) To reduce the risk of pollution the tank to be surrounded by an impermeable bund wall (e.g. brick, block or metal) to contain the contents of the largest tank when full plus 10%. The bund to be kept clear at all times. If a drain cock is to be fitted it should have a padlocked lever valve. There should be a procedure for draining off and removal of rainwater held within the bund
- d) Tanks always to be level. Tanks that settle to be levelled by a qualified installer as soon as possible after settling has been discovered. Tanks to always be handled without being dropped or dragged
- e) Fit an oil safety valve/anti siphon valve which are designed to automatically shut-off flow of oil from a tank in the event that the line between the valve and the oil burner is broken or severed. This device prevents fuel from siphoning out of the tank
- f) Exposed oil lines to be protected by a durable hard plastic/PVC or similar cover between the tank and the premises to prevent damage
- g) For heating oil tanks, consider the installation of a fusible link designed to automatically close the oil supply line in case of fire

- h) Ongoing tank maintenance and periodic inspection to be undertaken periodically throughout the year
- i) Spillage kits containing materials such as oil or chemical absorbents together with appropriate personal protection clothing to be provided. Oil tanks to be labelled with information on procedures to follow in the event of a leak
- j) Tanks sited in close proximity to SSSIs, rivers, drains or watercourses, irrespective of size to be fully bunded
- k) Impact protection may need to be considered where tanks are located in close proximity to drives or yard areas where there are frequent vehicle movements.



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IMPORTANT NOTE

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BC028INF/0315

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